

Serial No. : 10/680,856
Filed : October 7, 2003

REMARKS

In the Office Action, the examiner rejected Claims 1-6 under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of any of Adams et al. (U.S. Patent No. 6,321,158), Phelps (U.S. Patent No. 5,326,417), and Friedman (U.S. Patent No. 3,094,716). The applicant has amended Claim 1 to include additional limitations so that the present invention be more clearly differentiated from the technologies disclosed by the cited references. The applicant has canceled Claim 4. The applicant has also canceled Claims 7-17 which are directed to the non-elected group of invention.

As recited in Claim 1 concurrently amended, the essential features of the present invention reside in the fact that (1) the thermoplastic resin plate is cut by using a water jet cutting machine which cuts an object by ultra-high pressure jet water, (2) the thermoplastic resin plate is formed of composite material having glass fibers in polypropylene resin, (3) the base member and the surface material overlapped with one another are pressure-formed at the same time to create an integral molding, (4) the end surface wrapped by the extended portion of the surface material is bent toward the top surface by a finishing tool which applies a pressure on the extended end portion, (5) the extended end portion is bonded to the top surface by an ultrasonic welding device, and (6) an end surface of the base member and an end surface of the surface material are flush with one another when the unwanted

Serial No. : 10/680,856
Filed : October 7, 2003

portions are removed. The admitted prior art and the cited references do not show or suggest the combination of the essential features of the present invention as discussed below.

With respect to the feature (1) noted above, the production method of the present invention cuts the thermoplastic resin plate by using a water jet cutting machine which cuts an object by ultra-high pressure jet water. Since the thermoplastic film plate is hard because it contains glass fibers as noted in the feature (2), an ordinary cutting tool may be easily worn out or broken. Thus, in the present invention, a water jet cutting machine is used to cut the thermoplastic resin plate. Such a specific way of cutting the thermoplastic resin plate is not shown or suggested in any of the cited reference or admitted prior art.

For example, the technology disclosed by the cited Adams et al. reference does not even include any cutting process before the molding process. Similarly, the technology disclosed by the cited Phelps reference does not even have the cutting process before the molding process. The cited Friedman reference is to produce cushion material which employs materials too remote to that of the sunshade of the present invention. Nevertheless, the production process of the cited Friedman reference does not include the cutting process either.

With respect to the feature (2) noted above, in the production method of the present invention, the thermoplastic resin plate is formed of composite material having glass fibers in polypropylene

Serial No. : 10/680,856
Filed : October 7, 2003

resin. As noted above with respect to feature (1), the thermoplastic resin plate used in the present invention is reinforced by the glass fibers therein. Such a specific type of material having glass fibers therein is not shown or suggested in any of the cited reference or the admitted prior art.

With respect to the feature (3) above, the base member and the surface material overlapped with one another are pressure-formed at the same time to create an integral molding. Although the cited Adams et al. reference and the cited Phelps reference show the idea of pressure-forming the base member and the surface material at the same time, the production process disclosed by these cited references do not have a step of cutting the thermoplastic resin plate to a shape of the base member before the pressure-forming process. In the present invention, the cutting step noted in the feature (1) is indispensable before the pressure-forming step for securely bonding the surface material to the base member. Thus, the feature (3) in combination with the feature (1) is not shown in the cited Adams et al. reference or in the cited Phelps reference. The cited Friedman reference does not show at all the idea of pressure forming the base member and the surface material at the same time.

With respect to the feature (4) noted above, in the present invention, the end surface wrapped by the extended portion of the surface material is bent toward the top surface by a finishing tool which applies a pressure on the extended end portion. The admitted

Serial No. : 10/680,856
Filed : October 7, 2003

prior art does not show such a specific tool for bending the end portion of the base member. None of the cited Adams et al. reference, the cited Phelps reference, and the cited Friedman reference show the process of bending the wrapped portion toward the top surface of the base member.

With respect to the feature (5) noted above, in the present invention, the extended end portion is bonded to the top surface by an ultrasonic welding device. The admitted prior art does not show such a specific welding device for bonding the extended end portion of the surface material to the top surface of the base member. None of the cited Adams et al. reference, the cited Phelps reference, and the cited Friedman reference show the process of bonding the extended end portion of the surface material to the top surface of the base member.

With respect to the feature (6) noted above, in the present invention, an end surface of the base member and an end surface of the surface material are flush with one another when the unwanted portions are removed. The admitted prior art does not show this feature of the present invention. None of the cited Adams et al. reference, the cited Phelps reference, and the cited Friedman reference show the process of removing the unwanted portions so that the end surface of the base member and the end surface of the surface material become flush with one another.

As discussed above, since the essential features of the present invention are not shown or suggested by the admitted prior

Serial No. : 10/680,856
Filed : October 7, 2003

art or the cited Adams et al., Phelps, and Friedman references, the applicant believes that the rejection under 35 U.S.C. 103(a) is no longer applicable to the present invention.

In this opportunity, the applicant has amended the specification to correct the minor wording errors therein. This is to verify that no new matter has been introduced by this amendment.

Under the circumstances, the applicant believes that the present application is in the condition for allowance, and the applicant respectfully requests that the present application be allowed and passed to issue.

Respectfully submitted,

MURAMATSU & ASSOCIATES

Dated: 1/5/2006

By: Yasuo Muramatsu
Yasuo Muramatsu
Registration No. 38,684
114 Pacifica, Suite 310
Irvine, CA 92618
(949) 753-1127

AMD-MD01.002
010406